Panasonic
ideas for life

Super Dynamic Full HD Network Camera

WV-SP509
WV-SP508

Preliminary

Full HD / 1,920 x 1,080 H.264 Network Camera featuring Super Dynamic

Key Features

- 1080p Full HD images up to 30 fps and 360p image up to 30fps simultaneously.
- Combining new "UniPhier®", Panasonic's proprietary System LSI platform and ***2 areas VIQS*** (Variable Image Quality on Specified area) function can decrease maximum 50%*1 network bandwidth.
- Cropping function enables to provide whole image(1,920 x 1,080) and the part image (640 x 360) simultaneously.
  Up to 4 image capture areas can be specified, and it is also possible to control the sequence.
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by new "UniPhier®".
- Super high resolution at Full HD/1,920 x 1,080 created by 3.1Megapixel high sensitivity MOS Sensor.
- ***Super Dynamic*** and ABS (Adaptive Black Stretch) technologies deliver 128x wider dynamic range compared to conventional cameras.
- Face Super Dynamic Range technology ensures clear face image.
- High sensitivity with Day & Night (IR) function:0.5 lx (Color), 0.06 lx (B/W) at F1.4 (WV-SP509)
- High sensitivity with Day & Night (Electrical) function:0.5 lx (Color), 0.3 lx (B/W) at F1.4 (WV-SP508)
- Using Panasonic distinctive LDC (Lens Distortion Compensation) function, natural image without distortion can be monitored though using wide angle lens.
- ABF (Auto Back Focus) ensures easy installation.
- ABF ensures stable focus in both color and B/W modes. (WV-SP509)
- Digital Noise Reduction: 3D-DNR ensures noise reduction in various conditions.
- Progressive scan ensures clear images with less motion blur and no tearing even when the subject is moving.
- Superior color reproduction by primary (RGB) color filter.
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes: Outdoor scene / Indoor scene (50 Hz) / Indoor scene (60 Hz) / ELC / Fixed electronic shutter
  Outdoor scene: Electronic shutter and ALC lens iris control are automatically controlled depending on the mode and luminance level.
  Indoor scene (50 Hz / 60 Hz): Flicker caused by fluorescent lightning will be automatically compensated.
  ELC: Up to 1/10,000 Electronic shutter is automatically applied for a fix iris lens.
  Fixed electronic shutter: Up to 1/10,000 fixed electronic shutter can be selectable.
- 2x extra zoom at VGA resolution
- VMD (Video Motion Detection) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Face detection function detects the position of human face and the information is sent by video stream.
- Privacy Zone can mask up to 2 private areas, such as house windows and entrances/exits.
- 2x, 4x digital zoom controlled by browser
- Camera title display: Up to 20 alphanumeric characters on the browser
- Alarm sources including 3 terminal input, VMD and Panasonic alarm command can trigger actions such as SDXC/SDHC/SD memory recording(WV-SP509), FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic alarm protocol output.
- Full duplex bi-directional audio allows interactive communication between camera site and monitoring site. (WV-SP509)
- JPEG Image compression ratio can be changed by alarm so that higher quality image can be provided.
- Prioritized stream control: One of the video streams can be prioritized when multiple recorders or client PCs are accessing the camera so that the recorder or the client PC can maintain the frame rate.
- SDXC/SDHC/SD Memory card slot for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG) (WV-SP509)
- H.264 max. bit rate/client and Total bit rate control allows flexible network traffic management. Frame rate priority mode controls bit rate and compression ratio to provide the specified frame rate.
- Internet mode: H.264 images can be transmitted over HTTP protocol.
- Multi-language: English / Italian / French / German / Spanish / Russian / Chinese / Japanese
- IPv4/IPv6 protocol supported
- Supports SSL, DDNS (viewnetcam, RFC2136)
- Still images (JPEG) can be viewed on mobile phones via the Internet.
- Onvif compliant model

*1 Compared with WV-NP502, reduction effect is decreased by object and image quality setting conditions.

Standard Accessories

- Installation Guide .....1 pc.
- CD-ROM*1 .....1 pc.
- Code label*2.....1 pc.

The following parts are used during installation procedures..

- Power cord plug .....1 pc.
- Safety wire plate for ceiling.....1 pc.
- Safety wire lug for wall.....1 pc.
- Wire lug fixing screws (M2.5 x 8 mm {5/16 inches}) ..... 2 pcs. (of them, 1 for spare)
- Washer.....1 pc.
- Spring washer .....1 pc.

*1 The CD-ROM contains the operating instructions and the software.
*2 This label may be required for network management. The network administrator shall retain the code label.

Optional Accessory

ALC Lens for 1/3 type CCD Cameras
2x Varifocal (High Resolution)
WV-LZA62/2
(2.8 ~ 6 mm)
F1.4 (Wide) F2.1 (Tele)

* It is impossible to use lenses without the focus adjustment function or zoom lenses.

Specifications

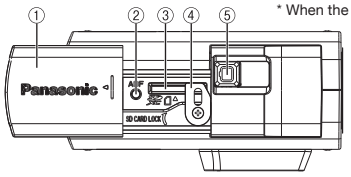
TV System			NTSC	PAL
Camera	Image Sensor		1/3 type MOS Sensor	
	Effective Pixels		Approx. 3.1 megapixel	
	Scanning Mode		Progressive scan	
	Scanning Area		4.51 mm (H) x 3.38 mm (V) {3/16 inches (H) x 1/8 inches (V)}	
	Minimum Illumination		WV-SP509 : Color: 0.5 lx, BW: 0.06 lx (F1.4, Auto slow shutter: Off (1/30s), Gain:On(High)) Color: 0.03 lx, BW 0.004 lx (F1.4, Auto slow shutter: Max. 16/30s, Gain:On(High)) *1 WV-SP508 : Color: 0.5 lx, BW: 0.3 lx (F1.4, Auto slow shutter: Off (1/30s), Gain:On(High)) Color: 0.03 lx, BW 0.02 lx (F1.4, Auto slow shutter: Max. 16/30s, Gain:On(High)) *1	
	White Balance		AWC (2,000 ~ 10,000 K), ATW1 (2,700 ~ 6,000 K), ATW2 (2,000 ~ 6,000 K)	
	Light Control Mode		Outdoor scene: Automatic integration of ALC and ELC Indoor scene [50 Hz]: Automatic integration of ALC and ELC (up to 1/100 s) Indoor scene [60 Hz]: Automatic integration of ALC and ELC (up to 1/120 s) ELC: (up to 1/10,000 sec.)	
	Shutter Speed		Fix shutter: 1/30, 3/100, 3/120, 2/100, 2/120, 1/100, 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 (only at Super Dynamic Off)	
	Super Dynamic		ON / OFF	
	Face Super Dynamic		ON / OFF (Only at Super Dynamic: ON)	
	Adaptive Black Stretch		ON / OFF (Only at Super Dynamic: OFF)	
	AGC		ON (LOW, MID, HIGH) / OFF	
	Electronic Sensitivity UP		OFF / AUTO (Max. 2x (2/30 s), 4x (4/30 s), 6x (6/30 s), 10x (10/30 s), 16x (16/30 s))	
	Day & Night		WV-SP509: IR Mode: AUTO1 / AUTO2 / ON / OFF, Level: High / Low, with external control WV-SP508: Electrical Mode: OFF / AUTO	
	Dynamic Range		52 dB typ. (Super Dynamic: ON, Light Control Mode: indoor)	
	Digital Noise Reduction		High / Low	
	Video Motion Detection		4 areas, Sensitivity: 15 steps, Detection size: 10 steps	
	Privacy Zone		Up to 2 zones, Gray	
	VIQS		Up to 2 zones	
	Camera Title (OSD)		Up to 20 characters (alphanumeric characters, marks)	
	Back Focus Adjustment		ABF/MANUAL, ABF mode upon CL/BW switching: AUTO / PRESET / FIX	
	Lens Distortion Compensation		256 steps	
Browser GUI	Cropping		H.264(2) / JPEG(VGA or 640 x 360) / JPEG(QVGA or 320 x 180) Up to 4 image capture areas can be specified	
	Camera Control		Brightness, AUX ON / OFF	
	Display Mode		Spot, Quad: Image from 16 cameras can be displayed in 4 different Quad screens or 16 split screen (JPEG only). 20 characters camera title available.	
	Digital Zoom		1x, 2x, 4x controlled by browser GUI	
	Camera Title		Up to 20 alphanumeric characters	
	Clock Display		Time: 12H/24H, Date: 5 formats on the browser, Summer time (Manual)	
	Alarm Control		Reset	
	One Shot Capture		A still picture will be displayed on a newly opened window.	
	Audio		Mic (Line) Input: ON / OFF Volume adjustment: Low / Middle / High, Audio Output: ON / OFF Volume adjustment: Low / Middle / High (Only at WV-SP509)	
	SD Memory Data Download		Still or motion Images recorded in the SDXC/SDHC/SD memory card can be downloaded. (Only at WV-SP509)	
	GUI/Setup Menu Language		English, Japanese, Italian, French, German, Spanish, Chinese, Russian	
	System Log		Up to 100 (Internal) Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error logs (Only at WV-SP509)	
	Supported OS *2 *3		Microsoft® Windows® 7, Microsoft® Windows Vista®,Microsoft® Windows® XP SP3	
	Supported Browser		Windows® Internet Explorer® 9.0 (32 bit), Windows® Internet Explorer® 8.0 (32 bit), Windows® Internet Explorer® 7.0 (32 bit), Microsoft® Internet Explorer® 6.0 SP3	
Network	Network IF		10Base-T / 100Base-TX, RJ-45 connector	
	Image Resolution	Image Capture Mode: 2 mega pixel [16:9]	H.264: 1,920 x 1,080 / 640 x 360 / 320 x 180, up to 30 fps JPEG (MJPEG): 1,920 x 1,080 / 640 x 360 / 320 x 180, up to 30 fps	
		Image Capture Mode: 1.3 mega pixel [16:9]	H.264: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps JPEG (MJPEG): 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps	
		Image Capture Mode: 1.3 mega pixel [4:3]	H.264: 1,280 x 960 / VGA(640 x 480) / QVGA(320 x 240), up to 30 fps JPEG (MJPEG): 1,280 x 960 / VGA(640 x 480) / QVGA(320 x 240), up to 30 fps	
		Image Capture Mode: 3 mega pixel [4:3]	H.264: 1,280 x 960, up to 15 fps JPEG (MJPEG): 2,048 x1,536, up to 15 fps	
	H.264 *4	Transmission Mode	Constant bitrate / Framerate priority / Best effort	
		Frame Rate	1 / 3 / 5 / 7.5 / 12 / 10 / 15 / 20 / 30 fps	
		Bit Rate/Client	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 8,192 / 10,240 / 12,288 / 14,336 kbps	
		Image Quality	LOW / NORMAL / FINE	
		Refresh Interval	0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 5 s	
		Transmission Type	UNICAST / MULTICAST	
	JPEG	Image Quality	10 steps	
		Refresh Interval	0.1 fps ~ 30 fps	
		Transmission Type	PULL / PUSH	
	Audio Compression *Only at WV-SP509		G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps	
	Audio Mode *Only at WV-SP509		OFF / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)	
	Authentication for Audio *Only at WV-SP509		Level 1 only / Level 2 higher / All users	
	Total Bit Rate		64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited	
	Supported Protocol		IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6,ICMP,ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP,FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP,IGMP,ICMP,ARP	
	FTP Client		Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDXC/SDHC/SD memory card is available. *) *Only at WV-SP509	
	No. of Simultaneous Users		Up to 14 users (Depends on network conditions)	
	SDXC/SDHC/SD Memory Card (Option) *Only at WV-SP509		H.264 recording: Manual REC / Alarm REC (Pre/Post) / Schedule REC JPEG recording: Manual REC / Alarm REC (Post) / Backup upon network failure Compatible SD (SDHC/SDXC) card: Panasonic 1 GB, 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64 GB** model *SDHC card, ** SDXC card (except miniSD card and microSD card)	

TV System		NTSC	PAL
Network	Cellular Phone Compatibility	JPEG image	
	Mobile Terminal Compatibility	iPad, iPhone, iPod touch	
	Face Detection	ON / OFF (with XML notification)	
Alarm	Alarm Source	WV-SP509 : 3 terminals input, VMD, Command alarm WV-SP508 : 1 terminal input, VMD, Command alarm	
	Alarm Actions	SDXC/SDHC/SD memory recording*, E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output *Only at WV-SP509	
	Alarm Log	With SDXC/SDHC/SD memory card*: 5000 logs, without SDXC/SDHC/SD memory card: 1000 logs *Only at WV-SP509	
	Schedule	Alarm / VMD / Access permission / H.264 recording	
Input/ Output	Monitor Output (for adjustment)	VBS: 1.0 V [p-p]/75 Ω, NTSC composite, RCA Jack	VBS: 1.0 V [p-p]/75 Ω, PAL composite, RCA Jack
	Microphone/Line Input *Only at WV-SP509	MIC IN and Line IN are selectable. ø3.5 mm stereo mini jack (monaural input) (Applicable microphone : Plug-in power type) Supply voltage: 2.5 V ±0.5 V Input impedance: approx. 2 kΩ	
	Audio Output *Only at WV-SP509	ø3.5 mm stereo mini jack (monaural output) Line level	
	External I/O Terminals	WV-SP509 : ALARM IN 1 / DAY/NIGHT IN, ALARM IN 2 / ALARM OUT, ALARM IN 3 / AUX OUT WV-SP508 : ALARM IN 1 / DAY/NIGHT IN, ALARM OUT, AUX OUT	
General	Safety/EMC Standard	UL (UL60950-1), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60950-1), DOC (ICES003 ClassA)	CE, IEC60950-1 (EN55022 ClassB, EN55024)
	Power Source and Power Consumption	WV-SP509 : 12V DC: 570 mA *, PoE (IEEE802.3af compliant) / PoE 48 V: 125 mA (Class 2 device) WV-SP508 : 12V DC: 550 mA *, PoE (IEEE802.3af compliant) / PoE 48 V: 120 mA (Class 2 device) * FOR UL LISTED MODEL(S), ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY.	
	Ambient Operating Temperature	–10 °C ~ +50 °C (14 °F ~ 122 °F)	
	Ambient Operating Humidity	Less than 90 % (no condensation)	
	Dimensions	75 mm (W) x 65 mm (H) x 132.5 mm (D) {2-31/32"(W) x 2-9/16"(H) x 5-1/4"(D)} excluding connectors/terminals	
	Mass (approx.)	420 g (0.93 lbs)	
	Finish	Fine Silver (501)	

*1 Converted value
*2 Refer to "Notes on Windows Vista® / Windows® 7" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 7 or Microsoft® Windows Vista®.
*3 When using IPv6 for communication, use Microsoft® Windows® 7 or Microsoft® Windows Vista®.
*4 Transmission for 2 streams can be individually set in the same compression method.

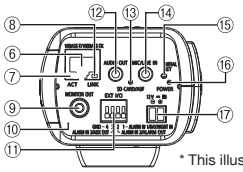
Part Names and Functions

Side View



* When the slide cover is opened.

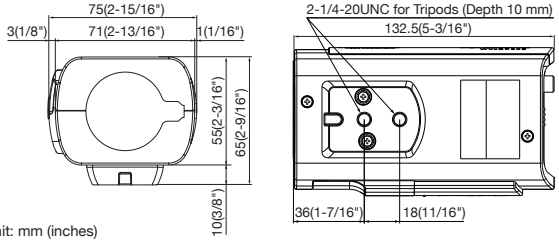
Rear View



* This illustration represents WV-SP509.

① Slide Cover
② Auto Back Focus Button (ABF)
③ SD Memory Card Slot (SP509 only)
④ Clamp for SD Memory Card (SP509 only)
⑤ ALC Lens Connector
⑥ Network Connector (RJ-45)
⑦ Access Indicator
⑧ Link Indicator
⑨ Monitor Out Connector for Adjustment
⑩ Rear Panel
⑪ External I/O Terminals
⑫ Audio Output Connector (SP509 only)
⑬ SD Memory Card Error Indicator (SP509 only)/ ABF Indicator
⑭ Microphone/Line Input Connector (SP509 only)
⑮ INITIAL SET Button
⑯ Power Indicator
⑰ 12 V DC Power Supply Terminals

Appearance



Unit: mm (inches)

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Important
– Safety Precaution: carefully read the operating instructions and installation manual before using this product.
– Panasonic can not be responsible for network performance and/or other manufacturer products that reside on the network.

- All TV pictures are simulated.
- Masses and dimensions are approximate.
- Specifications are subject to change without notice.
- These products may be subject to export control regulations.
- All product pictures are NTSC models.

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Printed in Japan (2A-085A)